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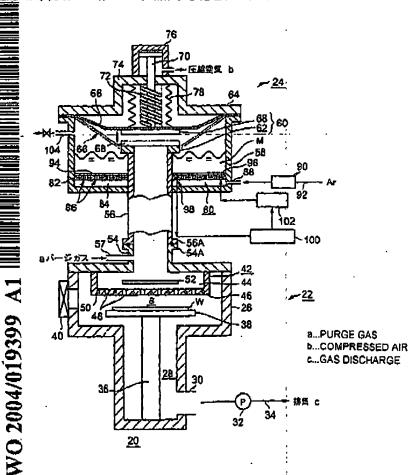
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/綾葉有/

(54) Title: GAS SUPPLY SYSTEM AND TREATMENT SYSTEM

(54) 発明の名称: ガス供給系及び処理システム



(57) Abstract: A treatment system capable of supplying a row material gas produced in a material storage vessel into a treatment apparatus substantially without causing a pressure loss. A treatment system has a treatment apparatus (22) with gas jetting means (42) for jetting a predetermined raw material gas, with low vapor pressure and formed of a metallic compound material (M), in a treatment container (26) to apply a predetermined treatment of an object (W) to be treated, and a gas supply system (24) for supplying the predetermined raw material gas to the gas jetting means. The gas jetting means is a shower head portion, and the gas supply system has a gas passage (56) extending upward from the shower head portion, a material storage vessel (58) installed on the upper end portion of the gas passage and receiving the metallic compound material in its inside, and an open/close valve (60) for opening and closing the gas passage.

INTERNATIO SEARCH REPORT Internation

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			PCT/JP03/10705		
A. CLAS	SIFICATION OF SUBJECT MATTER				
Int.	.Cl' H01L21/31, C23C16/448				
According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELD	OS SEARCHED				
Minimum	documentation searched (classification system follow	d by classification symbo	(ala	_	
	.Cl ⁷ H01L21/31, C23C16/448	•			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched					
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2003 Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003					
Electronic	data base consulted during the international search (na	me of data base and, whe	re practicable, search terms used)		
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C. DOCU	MENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document, with indication, where			<u> </u>	
	US 6424800 B1 (Samsung Elec 23 July, 2002 (23.07.02),	tronics Co., L	td.),		
X	23 0diy, 2002 (23.07.02), Figs. 5, 9		1,4-7,26-27,		
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¥ A	Figs. 5, 9		37-44		
A ·	Figs. 5, 9		2-3,34-35	.	
	& JP 2001-131754 A Figs. 5, 9				
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	15 July, 1994 (15.07.94),				
	Figs. 1 to 3 · · · · · · · · · · · · · · · · · ·				
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Further documents are listed in the continuation of Box C. See patent family annex.					
	Special categories of cited documents: "A" document defining the general state of the art which is not priority date and not in conflict with the application but cited to			ヿ	
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cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention or other special reason (as specified) "O"			¢ an inventive sice when the document is	٤	
"O", docum	ent referring to an oral disclosure, use, exhibition or other	Of More puber such documents, such	-		
means Combination being obvious to a person skilled in the and document published prior to the international filing date but later than the priority date claimed Combination being obvious to a person skilled in the and document member of the same patent family				-	
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Form PCT/ISA/210 (continuation of second sheet) (July 1998)

l application No. PCT/JP03/10705

C (COMUNUS	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	· · · · · · · · · · · · · · · · · · ·
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2-124796 A (Mitsubishi Electric Corp.), 14 May, 1990 (14.05.90), Fig. 1 (Family: none)	1-7
A	US 5019531 A (Nippon Telegraph And Telephone Corp.), 28 May, 1991 (28.05.91), Fig. 1 & JP 2-256238 A Fig. 1 & DE 3916622 A1	8-25
A	JP 2001-73145 A (Tokyo Electron Ltd.), 21 March, 2001 (21.03.01), Fig. 4 (Family: none)	8-25
P,A	<pre>JP 2003-197613 A (Hitachi Kokusai Electric Inc.), 11 July, 2003 (11.07.03), Fig. 1 (Family: none)</pre>	8-25
х	JP 2001-68465 A (Tokyo Electron Ltd.), 16 March, 2001 (16.03.01), Figs. 1, 5 & US 6482266 B1	26,28,30,36
A	JP 2000-122725 A (CKD Kabushiki Kaisha), 28 April, 2000 (28.04.00), Fig. 1 (Family: none).	29
×	JP 4-99279 A (Seiko Epson Corp.), 31 March, 1992 (31.03.92), Figs. 1 to 2 (Family: none)	26,31,36
A	JP 4-369833 A (Matsushita Electric Industria) Co., Ltd.), 22 December, 1992 (22.12.92), Fig. 1 (Family: none)	31
x	JP 7-18449 A (Hitachi, Ltd.), 20 January, 1995 (20.01.95), Fig. 7 (Family: none)	26,32,36
Y .	WO 94/06529 Al (Mitsubishi Electric Corp.), 03 March, 1994 (03.03.94), Fig. 15 & US 5520858 A	37-44
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P	JP03/10705

Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)				
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:				
Claims Nos.: because they relate to subject malter not required to be searched by this Authority, namely:				
2. Claims Nos.: because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:				
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).				
Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)				
This International Searching Authority found multiple inventions in this international application, as follows: The special technical feature of Claims 1-7 is that first carrier gas supply means "comprises a gas diffusion chamber provided in the bottom of a material storage vessel, and a gas jetting plate defining the gas diffusion chamber and having a large number of gas jetting holes." The special technical feature of Claims 8-25 is that a treatment system has "an open/close valve for opening and closing a gas passage." The special technical feature of Claims 26-44 is that a treatment system has "detection means for detecting condition in a gas passage or in a material storage vessel, and a control portion for performing control so that a value detected by the detection means is maintained at a predetermined value."				
1. X As all required additional search fees were timely paid by the applicant, this international search report covers all searchable				
daims.				
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.				
3. As only some of the required additional search fees were timely paid by the applicant, this international search report cover only those claims for which fees were paid, specifically claims Nos.:				
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No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:				
Remark on Protest The additional search fees were accompanied by the applicant's protest.				
No protest accompanied the payment of additional search fees.				
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